

REMARKS

The Official Action mailed November 3, 2008, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on August 22, 2006; and July 7, 2008.

Claims 1-16 are pending in the present application, of which claims 1-8, 10, 12 and 13 are independent. Claims 1-15 have been amended to better recite the features of the present invention. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action asserts that the claims 1, 5-7 and 13-15 are product-by-process claims. However, a product-by-process claim "is a product claim that defines the claimed product in terms of the process by which it is made" (MPEP § 2173.05(p)). Claims 1, 5-7 and 13-15 are not product-by-process claims. That is, claims 1, 5-7 and 13-15 do not define the claimed product in terms of the process by which it is made. In any event, claims 1, 5-7 and 13-15 have been amended to remove language preceded with the phrase "configured to." These features are not believed to be critical to the patentability of the claims. The Applicant respectfully submits that amended claims 1, 5-7 and 13-15 are not product-by-process claims. As such, the burden of proof remains with the Patent Office.

The Official Action asserts that claims 1-8, 10 and 12-15 contain "functional language" and appears to disregard such language. That is, in ascertaining the scope of the claim, the Official Action ignores a basic precept set forth in the MPEP, that is, "A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used" (MPEP § 2173.05(g)). In any event, claims 1-8, 10 and 12-15 have been amended to remove language preceded with the phrase "configured to"

and claims 4, 8 and 12 have been amended to remove language such as “for demodulating the first optical signal received in the light-receiving element” and “that conducts arithmetic operation according to the first optical signal that is demodulated to generate a third signal.” These features are not believed to be critical to the patentability of the claims. As such, the amended claims do not recite functional language. Therefore, the Examiner’s concerns regarding allegedly functional language are now believed to be moot.

The Official Action rejects claims 1-3, 5-8, 10, 11 and 13-15 as obvious based on U.S. Publication No. 2003/0052324 to Kimura. The Official Action rejects claims 4 and 12 as obvious based on the combination Kimura and U.S. Patent No. 6,590,633 to Nishi. The Official Action rejects claims 9 and 16 as obvious based on the combination of Kimura and U.S. Publication No. 2004/0152392 to Nakamura. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. “The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.” In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See

also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claim 1 has been amended to recite “wherein the antenna, the light-emitting element and the light-receiving element are electrically connected to the integrated circuit on the same substrate.” Independent claims 2, 4, 10 and 12 have been amended to recite “wherein the integrated circuit, the light-emitting element and the light-receiving element are formed on the same substrate.” Independent claim 3 and dependent claim 11 have been amended to recite “wherein the antenna, the integrated circuit, the light-emitting element and the light-receiving element are formed on the same substrate.” Independent claims 5-8 and 13 have been amended to recite “wherein the integrated circuit, the light-emitting element and the light-receiving element are formed on the second substrate.” These features are supported in the present specification, for example, by Figure 1A. As noted above, the claims have also been amended to remove features which are not believed to be critical to the patentability of the claims. The Applicant respectfully submits that Kimura, Nishi and Nakamura, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

For example, the Official Action asserts that Kimura teaches “an antenna 2708 (Fig. 13G, Para. 190)” (page 3, Paper No. 20081023). However, regarding claims 1, 3 and 11, Kimura does not teach or suggest that the antenna 2708 could or should be formed on the same substrate as the light-emitting element, the light-receiving element and the integrated circuit. The Applicant further respectfully submits that Kimura does not teach or suggest the features of amended independent claims 2, 4-8, 10, 12 and 13.

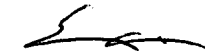
Nishi and Nakamura do not cure the deficiencies in Kimura. Nishi is relied upon to allegedly teach a demodulation circuit (pages 9-11, Id.), and Nakamura is relied upon to allegedly teach the features of dependent claims 9 and 16 (page 12, Id.). However,

Kimura, Nishi and Nakamura, either alone or in combination, do not teach or suggest that Nishi should be modified to include the features of the amended claims.

Since Kimura, Nishi and Nakamura do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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